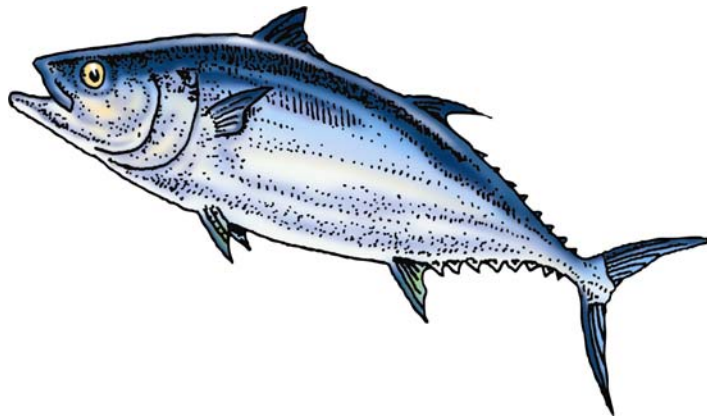


Biennial Report to Congress on Atlantic Bluefin Tuna (2003-2004)

**Compiled by the National Marine Fisheries Service
pursuant to the Atlantic Tunas Convention Act of 1975
(16 U.S.C. 971i(a))**



February 2, 2005

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(1) U.S. Landings of Atlantic Bluefin Tuna

Section 971i(a)(1) of the Atlantic Tunas Convention Act of 1975 (16 U.S.C. 971i(a)) requires that the biennial report for Congress shall include the level of taking of bluefin tuna by U.S. fishermen in the Convention Area as defined in Article I of the International Convention for the Conservation of Atlantic Tunas (ICCAT). Provisional estimates of U.S. landings by gear type are presented in Table 1.

(2) Status of the Stocks

ICCAT is a multi-national cooperative management body that provides scientific information and management recommendations for stocks of Atlantic tunas and tuna-like species. The latest stock assessment was conducted by ICCAT's Standing Committee on Research and Statistics (SCRS) in 2002 for both Atlantic bluefin tuna management units (East and West). The next stock assessment for both management units is scheduled for 2006. The two management units for Atlantic bluefin tuna are separated at 45 degrees W longitude above 10 degrees N latitude and at 25 degrees W longitude below the equator, with an eastward shift in the boundary between those parallels.

The West Atlantic stock assessment included projections for two scenarios about future recruitment. One scenario assumed that future recruitment will approximate the average estimated recruitment since 1976, unless spawning stock size declines to low levels. The second scenario anticipated an increase in recruitment corresponding to an increase in spawning stock size up to a maximum level no greater than the average recruitment for 1970 - 1974. These scenarios were referred to as the low recruitment and high recruitment scenarios, respectively. Current estimates of the status of the West Atlantic stock are summarized in Table 2.

The results of projections based on the low recruitment scenario for the West Atlantic stock indicated that a constant catch of 2500 mt per year has a 97 percent probability of allowing rebuilding to the associated biomass at maximum sustainable yield level by 2018, and a catch of 2700 mt has about a 95 percent probability. The SCRS notes that, arguably, SSB_{75} is appropriate as a target level for the high recruitment scenario. Under the high recruitment scenario, a constant catch of about 2500 mt has about a 60 percent probability of allowing rebuilding to the 1975 stock size; a catch of 2700 mt has about a 52 percent chance. The SCRS cautioned that these conclusions do not capture the full degree of uncertainty in the assessments and projections. The projected increases in stock size are strongly dependent on estimates of recent recruitment, which are a particularly uncertain part of the assessment. The implications of stock mixing between the East and West Atlantic add to the uncertainty.

The SCRS noted again, as it has in the past, that mixing of East and West management unit fish could have important implications for both resources. In particular, the condition of the eastern Atlantic stock and fishery could adversely affect recovery in the West Atlantic. Based on these concerns, a working group met in 2004 to review scientific research regarding mixing, and is scheduled to meet again in 2005 to develop a range of future alternative management approaches for review by the SCRS in 2005.

The SCRS' management recommendations for the West Atlantic stock are based on ICCAT's 1998 Rebuilding Program, which aspires to rebuild with 50% probability to SSB_{MSY} by 2018. In light of uncertainty in the assessment including recruitment estimates, stock mixing, and rebuilding targets, the weight of scientific opinion within the SCRS favored no change from the total allowable catch (TAC) established in the rebuilding program of 2500 mt. However, in 2002, ICCAT amended the rebuilding program to increase the TAC to 2700 mt.

The SCRS updated the assessment for the East Atlantic and Mediterranean stock in 2002, but noted that it lacked confidence in the analysis for several reasons including increased under-reporting and a lack of CPUE and size data for important Mediterranean fisheries. In its 2004 report, the SCRS again noted that increases in Mediterranean farming activity have significantly impacted the data available for stock assessments. The 1998 projections show that current catch levels cannot be sustained in the long-term under the current selectivity pattern and current fishing mortality rate for the stock. Results for the 2002 analysis were similar to 1998's assessment in terms of trends but more optimistic in terms of current depletion. The SSB in 2000 was estimated to be about 86% of the 1970 level, up from the 1998 estimate of 47%. The improvement was primarily due to updated data and recent increases in recruitment. Fishing mortality has increased, especially for older fish since 1993 and was almost 2.5 times higher than that which maximizes yield per recruit. If either total fishing mortality or the mortality of small fish could be reduced substantially, then SCRS projections indicate that current or even higher yields (perhaps more than 50,000 mt) could be sustained. The SCRS expressed continued concern about the intensity of fishing pressure on small fish. This contributes substantially to growth over-fishing, and seriously reduces the long-term potential yield from the resource. Additionally, the recent abrupt increase of catches of large fish since 1994 is of grave concern. Current estimates of the status of the East Atlantic stock are summarized in Table 3.

ICCAT did not reduce the total allowable catch for the East Atlantic and Mediterranean stock in 2003 or 2004. However, ICCAT did include virtually all entities of concern in its allocation scheme, established in 2002, which caps TAC at 32,000 mt per year through 2006, and requires a management program re-evaluation in 2005 before rollover underages may be applied. ICCAT also addressed the high fishing mortality on juvenile fish by reducing tolerances for small fish harvest and increasing the Mediterranean's minimum size from 3.2 kg to 4.8 kg in 2002 and further to 10 kg in 2004. Parties are also required to develop plans to reduce catches of Mediterranean juveniles to at least reach the recommended tolerance levels. In both 2002 and again in 2004, ICCAT established data collection requirements for farming operations to address the SCRS' concern about the deterioration of data available for stock assessments.

(3) Implementation of the Observer Program under 16 U.S.C. Section 1827

There has been no fishing in U.S. waters for Atlantic bluefin tuna by foreign vessels since 1988. Therefore, there is no activity to report under the specified observer program during the years 2003 - 2004.

**Tables for Biennial Report to Congress
on Atlantic Bluefin Tuna (2003 - 2004)**

Table 1. U.S. Landings of Atlantic Bluefin Tuna (2003 - 2004¹)

Permit Category	2003	2004¹
General	595.1	342.9
Harpoon	53.2	29.9
Longline	94.3	39.8
Purse Seine	265.4	31.8
Angling²	410.7	358.9
Reserve³	0.2	0.0

¹2004 landings are preliminary and are subject to change. The 2004 fishing year ends May 31, 2005.

² 2003 and 2004 landings for the Angling category based on preliminary estimates produced by the Large Pelagics Survey as well as North Carolina tagging census data.

³Landings counted against the Reserve category are based on incidental BFT mortality taking place during ongoing scientific research projects (e.g., archival tagging off North Carolina and in the Gulf of Mexico).

Table 2. Summary Table for the Status of West Atlantic Bluefin Tuna

Age/size at Maturity	Age 8/~ 200 cm fork length
Spawning Sites	Primarily Gulf of Mexico and Florida Straits
Current Relative Biomass Level <i>Minimum Stock Size Threshold</i>	SSB ₀₁ /SSB ₇₅ (low recruitment) = .13 (.07-.20) SSB ₀₁ /SSB ₇₅ (high recruitment) = .13 (.07-.20) SSB ₀₁ /SSB _{msy} (low recruitment) = .31 (.20-.47) SSB ₀₁ /SSB _{msy} (high recruitment) = .06 (.03-.10) <i>0.86B_{MSY}</i>
Current Relative Fishing Mortality Rate <i>Maximum Fishing Mortality Threshold</i>	F ₀₁ /F _{MSY} (low recruitment) = 2.35 (1.72-3.24) F ₀₁ /F _{MSY} (high recruitment) = 4.64 (3.63-6.00) <i>F/F_{MSY} = 1.00</i>
Maximum Sustainable Yield	Low recruitment scenario: 3500 mt (3300-3700) High recruitment scenario: 7,200 mt (5900-9500)
Catch (2003) including discards	2146 mt
Short Term Sustainable Yield	Probably > 3000 mt
Outlook	Overfished; overfishing continues to occur

Table 3. Summary Table for the Status of East Atlantic Bluefin Tuna

Age/size at Maturity	Age 4-5
Spawning Sites	Mediterranean Sea
Current Relative Biomass Level	SSB ₀₀ /SSB ₁₉₇₀ = .80
Current Relative Fishing Mortality Rate	F ₀₀ /F _{MAX} = 2.4
Maximum Sustainable Yield	Not estimated
Current (2001)¹ Yield	34,557 mt
Yield (long term)	23,543 to 24,649 mt
Outlook	Overfished; overfishing continues to occur.

¹2002 and 2003 catches are not included in this summary table because reports to the SCRS are incomplete.